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EXAMINER

SCHIFFMAN, BENJAMIN A

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,493	Applicant(s) MARIS, GIANFRANCO	
	Examiner BENJAMIN SCHIFFMAN	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The papers submitted 25 June 2009, amending claim 1 and canceling claim 7 are acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plamthottam et al (US 4,906,421) in view of Tynan (US 4,028,302).
2. Regarding claims 1, PLAMTHOTTAM ET AL teaches mixing tackifying resins (see column 11 line 26-29) to a composition comprising a rubber (see column 4 line 48-50) and solvent (see column 7 line 50-54) in a twin, analogous to dual, screw extruder (see abstract). The tackifying resin may be alpha pinene (column 13 line 55), which is a hydrocarbon.

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3. PLAMTHOTTAM does not appear to expressly disclose wherein at least a fraction of the solvent is added at a point of the extruder that is downstream of the initial section at which the rubber and the resin is added; or that at the outlet of the extruder the temperature of the composition produced by dissolving the other ingredients rubber and resin in the solvent being less than the boiling point of the solvent.

4. However, TYNAN teaches a process for the production of a composition comprising mixing a polymer (see Fig. 1 at 6) and a solvent (see Fig. 1 at 9) in a twin-screw extruder (see Fig. 1 at 1; see also column 3 line 37-42). The solvent is introduced at a point downstream the initial section of the extruder (see Fig. 1 at 11). In addition, the temperature of the composition (see Table 1) is kept below the boiling point of the solvent (see column 5 line 46-49), i.e. less than 150 °C.

5. At the time of invention, it would have been *prima facie* obvious to one of ordinary skill in the art to modify the method of mixing rubber of PLAMTHOTTAM to include the downstream addition of the solvent as well as the temperature of the outlet of TYNAN, in order to eliminate the formation of agglomerates with a slow heating process (see TYNAN column 2 line 63-68) of an intimately mixed cold slurry.

6. Regarding claims 2-3, Tynan teach an extrusion device with a diameter of 83.2 mm, i.e. 83 mm + 0.2 mm (see column 6 line 7-9). The solvent is injected in three streams (plurality of different point) at points 515mm, 645mm, and 755 mm from the upstream end of the device.

7. Regarding claim 6, Plamthottam discloses a rubber based pressure sensitive adhesive, specifically the rubbers can be natural, isoprene based rubbers (see US

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3,932,328 abstract), or synthetic, nonisoprene based rubbers (see US 4,152,231 abstract) (both incorporated into Plamthottam by reference see column 5 lines 5-23).

8. Regarding claim 8, Plamthottam et al. teach adding tackifying resins (see column 11 line 26-29) to a composition comprising a rubber (see column 4 line 48-50) and solvent (see column 7 line 50-54). The solvent used may comprise hexane (see column 7 line 62-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use hexane as the solvent in the method by Tynan in view of Plamthottam et al. because Plamthottam et al. teach hexane reduces the viscosity of the composition so that it may be easily handled in bulk (see column 7 line 64-66).

9. Regarding claim 9, Tynan teaches rotating the screw elements at the same time, i.e. co-rotate (see column 4 line 9-11).

10. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plamthottam et al. in view of Tynan as applied to claim 1 above, and further in view of Burbank et al. (Producing adhesives and sealants with a twin-screw. *Adhesives & Sealants Industry*. June/July 1998. Vol. 5 Issue 5, p. 44).

11. Regarding claim 4, Plamthottam et al. teach heating the composition from 8°C and 160°C (see claim 7). Plamthottam et al. are silent regarding keeping the portion of the extruder upstream of the solvent addition point between 60°C and 120°C and keeping the portion of the extruder downstream of the solvent addition point between 40°C and 80°C. Burbank et al. recognize temperature is a very important process

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variable (see p. 4 and p. 5) in the continuous compounding of compositions to produce adhesives and sealants with a twin-screw extruder (see Title). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention without undue experimentation to determine optimum temperature range of the extrusion process in the method by Plamthottam et al. in view of Tynan because Burbank et al. teach that that temperature is a process variable which controls the quality of an adhesive produced (see p. 5 paragraph 5-7). "Discovery of optimum value of result effective variable in known process is ordinarily within skill of art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. Regarding claim 5, Plamthottam et al. in view of Tynan teach every claimed limitation except adding the tackifying resin (hydrocarbon resin) at a point of the extruder downstream the initial section. Burbank et al. teach adding tack resins at successive locations downstream the initial section (see p. 3 last two paragraphs; see also p. 4 first paragraph). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the tackifying resin (hydrocarbon resin) at a point of the extruder downstream the initial section in the method by Plamthottam et al. in view of Tynan because Burbank et al. teach adding tack resin downstream the initial section reduces viscosity differential (see p. 3 last paragraph).

Response to Arguments

13. Applicant's arguments filed 25 June 2009 have been fully considered but they are not persuasive.

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14. In response to applicant's argument that Plamthottam et al. fails to disclose a composition including a solvent; however, Plamthottam does disclose that in certain applications a solvent-free extrudate is not required and therefore some residual solvent would remain in the composition (**see col. 11 l. 19-25**). Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "that the invention allows to extrude an adhesive formulation which is dissolved in a solvent") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Specifically, the instant claims do not require that the composition is extruded merely that at some point it is formed in an extruder. This is the same as the process of Plamthottam, where the claimed composition is at the outlet of the section immediately before the solvent extraction section (**see col. 9 l. 54-65 and fig. 4 elements 24, 25, 29**), or before the final solvent extraction section depending on the desired amount of solvent in the final extruded material. Thus the process of the instant claims forms an intermediate product of Plamthottam. Furthermore, although the intended use of the invention of Plamthottam is to form a composition which does not include solvent, one of ordinary skill would recognize that simply removing the solvent removal steps would obtain the process of the instant claims, and one would be motivated to eliminate these steps in order to produce a liquid composition could be utilized in additional processes, such as coatings (**see MPEP 2144.04**).

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15. More so, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

16. In response to applicant's argument that Tynan and Plamthottam are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, they are both concerned with the addition of solvent to a polymer in an extrusion apparatus, Tynan further is concerned with the addition of the solvent at multiple inlets which has the improvement of eliminating the formation of agglomerates with a slow heating process (see TYNAN column 2 line 63-68) in an intimately mixed cold slurry. Additionally, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

17. Finally, In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

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hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

19. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN SCHIFFMAN whose telephone number is (571)270-7626. The examiner can normally be reached on Monday through Thursday from 9AM until 4PM.

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21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHRISTINA JOHNSON can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENJAMIN SCHIFFMAN/
Examiner, Art Unit 1791

/Matthew J. Daniels/
Primary Examiner, Art Unit 1791
10/9/09